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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,873	06/14/2006	Masaki Iwasaki	292122US0PCT	6546

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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THAKUR, VIREN A

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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01/28/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/582,873	IWASAKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	VIREN THAKUR	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/9/08; 10/30/08</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 16, 2008 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-5, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites in the preamble of the claim, a "packaged beverage, comprising a green tea extract comprising the following ingredients (A) to (E)." This language is not clear as to whether the green tea extract comprises A to E in the claimed weight percentages and ratios or whether the packaged beverage comprises components A to E in the claimed weight percentages and ratios.

### ***Claim Rejections - 35 USC § 103***

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**6. Claims 1,3-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohishi et al. (US 20030077374 A1) in view of Kuznicki et al. (US 5681569), Ekanayake et al. (US H001628 H) and Broz (US 20020197376).**

Regarding instant claim 1, Ohishi et al. teach a packaged beverage (Paragraph 0044 and 0045) comprising green tea extract comprising non-polymer catechins from 0.092 to 0.5 percent (Paragraph 0012), which falls within the range of 0.01 and 1 percent, as claimed; quinic acid (Paragraph 0013); an artificial sweetener, such as aspartame, at between 0.05 to 1 percent (Paragraph 0041), which falls within the claimed range of 0.0001 to 15 percent; sodium ions as a result of adding a salt such as sodium polyphosphate, at between 0.01 to 0.5 percent (Paragraph 0043), which is within the claimed range of 0.001 to 0.5 percent. Regarding the pH, Ohishi et al. teach

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wherein the pH is from 2 to 7, thus encompassing the claimed range of 2 to 6; and in an example, Ohishi et al. teach the pH of 3.2 (Paragraph 0038), thus teaching a beverage having a pH between 2 and 6. Ohishi et al. further teach the ratio of quinic acid to non-polymer catechins as between 0.01 to 1, preferably from 0.01 to 0.5, thus falling within the claimed range (Paragraph 0032). Regarding the oxalic acid, Ohishi et al. teach that if the quinic acid contains oxalic acid, then the amount of oxalic acid should not exceed the content of quinic acid (Paragraph 0033). Furthermore, since the ratio of quinic acid to non-polymer catechins is between 0.01 to 1 or between 0.01 and 0.15 depending on the extract used (Paragraph 0031), then the ratio of oxalic acid to non-polymer catechins would also be a similar ratio. Therefore at a ratio of 0.01, Ohishi et al. would encompass the claimed ratio of not greater than 0.06. Nevertheless, the amount of quinic acid and thus the amount of oxalic acid would have been obvious for the purpose of preventing adverse aftertaste to the beverage. Therefore to ensure that the oxalic acid is at a ratio such at 0.01 in terms of the amount of non-polymer catechins would have been obvious to one having ordinary skill in the art for the purpose of preventing an adverse aftertaste to the beverage.

Claim 1 now recites the limitation that the sweetener consists essentially of an artificial sweetener. It is noted that Ohishi et al. already teach that the sweetener can be an artificial sweetener (paragraph 0041, see aspartame). In addition in table 1, Ohishi et al. teaches wherein the sweetener employed is sucralose.

Ohishi et al. are silent in teaching wherein the packaged beverage also contains from 0.001 to 0.2 percent of potassium ions.

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It is noted that from applicants' specification that the purpose of using sodium and potassium ions which are added as a result of adding a salt is for the purpose of improving the taste of the product, based on controlling the bitterness and astringency (See Pages 3-4, Paragraph 0006 of applicants' specification). Even further, the specification further teaches on pages 11-12, paragraphs 0020 to 0023, that the sodium and potassium ions exist in fruit extract and tea extract. As such, Ohishi et al. teach a tea extract and further teach fruit extract beverages (Paragraph 0039) and using tea extract in the beverage. Therefore, this teaches the skilled artisan that there would have been a reasonable expectation that the fruit extract and tea extract of Ohishi et al. would also have contained sodium and potassium ions, for providing a specific taste to the beverage. As discussed above, Ohishi et al. teach the claimed range of sodium ions but are silent in the potassium ions and the claimed range. Ohishi et al. also recognize that bitterness and astringency is a problem with large amounts of catechins (Paragraph 0008). Similar to applicants, Ohishi et al. teach reducing the bitterness and astringency of the beverage (See Abstract and Paragraph 0009). The inorganic salts taught by Ohishi et al., such as sodium metaphosphate and sodium polyphosphate have been well known to be used as buffers for controlling taste in beverages. Ekanayake et al. is cited as further evidence of salts that act as buffers for tea extract, which is used for beverages (Column 2, Lines 16-17 and Lines 41-44). Broz (US 20020197376) is also cited for the use of sodium and potassium salts that act as buffers to improve the taste of a beverage. Yamamoto (JP08-000173) has been relied on as further evidence that the concept of employing ions such as potassium ions can

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stabilize the quality of tea leaves and moderate the bitterness. This is even further recognized by Inaoka et al. (WO0239822 A1) on page 17, where the salts, such as sodium salts incorporated into the beverage adjust the taste of the beverage.

Therefore, the art taken as a whole clearly teaches that sodium and potassium salts improve on the bitterness and astringency associated with tea beverages and catechins

In any case, Kuznicki et al. is relied on for teaching a beverage that contains tea solids, electrolytes and carbohydrates to provide improved drinkability (Column 2, Lines 45-48) and for improved cellular hydration. Kuznicki et al. also teach that electrolytes such as sodium and potassium ions are present in fruit juices and in the tea extract, and further teach wherein the percentage of potassium ions is between 0.005 to 0.08 percent (Column 5, Lines 11-19), which is within the instantly claimed range. Kuznicki et al. also teach the combination of the potassium ion with the sodium ions, in a packaged beverage (Column 9, Lines 20-22). As recognized by the prior art, the sodium and potassium salts also act to stabilize and buffer the beverage, thus improving the taste of the beverage, and Kuznicki et al. further teach that the sodium and potassium ions aid facilitate cellular hydration (Column 5, Lines 24-28) and are the major physiological electrolytes (Column 4, Line 66 to Column 5, Line 3). Thus including the electrolytes in a sports drink, such as that of Kuznicki et al. aids in replacing one's electrolytes after physical activity. The beverages of Kuznicki et al. and Ohishi et al. are similar in that both teach a beverage comprising catechins and fruit extract and teach improving the drinkability of the beverage. The beverage of Kuznicki et al. is drawn to a sports drink type beverage and Ohishi et al. similarly teach making

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packaged beverages such as sports beverages (Paragraph 0039). Therefore, it would have been obvious to one having ordinary skill in the art to apply the potassium ions, in combination with the sodium ions already employed by Ohishi et al., for the purpose of improving the taste of the beverage, since it is known in the art, as evidenced by Ekanayake et al. that salts act as buffers and control the taste associated with a beverage as a result of their ability to control the stability and quality of the food product. Since Ohishi et al. teach making sports beverages, it would further have been obvious to one having ordinary skill in the art to use the potassium and sodium salts, as taught by Kuznicki et al. for the purpose of facilitating cellular hydration, thus increasing the physiological effects of the beverage by facilitating replenishment of one's electrolytes after physical activity. Furthermore, to employ a specific amount of the potassium ions, such as that taught by Kuznicki et al. would have been obvious to the ordinarily skilled artisan since it has been recognized in the art that such salts can control the taste and stability of the beverage, while also facilitating the cellular hydration of the nutrients of the beverage while replenishing the body's electrolytes. Therefore to use a particular amount would have been obvious for the purpose of achieving the desired taste, stability and hydration levels without drawing water out of the body, and thus would not have provided a patentable feature over the prior art, absent any clear and convincing evidence to the contrary.

Regarding instant claim 3, Ohishi et al. teach non-tea based beverages (Paragraph 0028).



Regarding instant claim 4, Ohishi et al. teach the pH between 2 to 7, as discussed above. Nevertheless, this encompasses the instant claimed range. The pH has been known to the ordinarily skilled artisan to impact the taste of the beverage as well as to aid in the preservation of the beverage. As an example, Ohishi et al. teach a pH of 3.2 in example 1. Nevertheless, to have a pH specifically from 2 to 5 would have been obvious to one having ordinary skill in the art for the purpose of achieving the desired taste of the beverage. Even further to choose any acidic pH level would have been obvious to the ordinarily skilled artisan for the purpose of achieving the desired taste and stability to the product. Therefore to have a pH from 2 to 5 would not have provided a patentable feature over the prior art.

Regarding instant claim 5, Ohishi et al. teach the ratio of the quinic acid to the non-polymer catechins from 0.02 to 0.55 (Paragraph 0027) and also between 0.01 to 0.16 (Paragraph 0031), if purified green tea extract is used. This encompasses limitation within the claimed range of 0.0001 to 0.16. Further regarding instant claim 5, Ohishi et al. teach the concentrate comprising between 30 to 98 percent non-polymer catechins or preferably 40 to 90 percent (Paragraph 0036), which falls within the claimed range of 20 to 90 percent.

Regarding instant claim 8, Ohishi et al. teach using PET bottles for the beverage (Paragraph 0045) and further teach that it has been known in the art to use transparent packaging, wherein said packaging is a PET bottle. Therefore, to use a transparent PET bottle would have been within the ordinarily capabilities of one skilled in the art,

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since Ohishi et al. teach that it was recognized in the art to use transparent PET bottles for packaging beverages and since Ohishi et al. teach a PET bottle.

**7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohishi et al. (US 20030077374 A1) in view of Kuznicki et al. (US 5681569) Ekanayake et al. (US H001628 H) and Broz (US 20020197376). as applied to claims 1, 3-5 and 8, above and in further view of Tsai et al. (US 4946701) and Teach Me Tea Cha.**

Ohishi et al., and Kuznicki et al. are taken as applied above. Regarding instant claim 7, it is interpreted that the beverage is in a form that would allow for ingestion of at least 300 mg of the non-polymer catechins per day. It is noted that Ohishi et al. teach having a high concentration of catechins (Paragraph 0009) and also teach that in the past 4 to 5 cups a day of tea would have to have been consumed to achieve the physiological effects of the catechins (Paragraph 0005). It is further noted that Ohishi et al. teach that the amount of non-polymer catechins present in the inventive examples are per 100 ml packages. Nevertheless, depending on the size of the packaged beverage, the particular amount of catechins consumed would also have increased. For instance, 10 ounces is equivalent to approximately 300 ml. This is slightly smaller than a conventional soda can size beverage. Even by this standard, if the beverage of inventive product 1 of Ohishi et al. was packaged in 300 ml portions, then 0.516 grams or 516 milligrams would have been consumed per the packaged beverage.

In any case, Tsai et al. teach that it has been well known in the art to provide a packaged beverage with at least 300 mg of catechins, as shown in examples 1 and 5, wherein the beverages contain 120 grams (152.6 x 95.7%) and 3.5 grams respectively. Tsai et al. similarly recognize that catechins have physiological benefits (Column 1, Lines 16-24).

Teach Me Tea Cha similar teaches that the catechins have physiological benefits, such as an anti-tumor effect. Teach Me Tea Cha also teach that a person who drinks 10 cups of green tea per day consumes between 0.6 to 1.2 grams of catechins. Ohishi et al. teach that in order to receive the full physiological effects that 4 to 5 cups of tea would have to have been consumed. If 5 cups of the tea of Teach Me Tea Cha was consumed, 0.3 to 0.6 grams of catechins would have been consumed, which is equivalent to 300 to 600 milligrams. Therefore, it would have been obvious to one having ordinary skill in the art that the beverage of Ohishi et al. would have permitted at least 300 mg of catechins per day since Ohishi et al. desire to have an easier means to ingest a larger amount of catechins (Paragraph 0004-0005) which would still provide the full physiological effects.

### ***Response to Arguments***

8. On page 5 of the response applicants urge that “none of the cited references disclose or suggest that a packaged beverage containing 0.0001 to 0.5 wt% of sodium ions and 0.001 to 0.2 wt% of potassium ions in conjunction with a sweetener, especially an artificial sweetener, would provide long term drinkability or improved storage

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stability.” Applicants make a similar argument on pages 10-11 that “there is no suggestion of any improvement in long term stability.” The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by applicant.

It is noted that Ohishi et al. already teaches the inclusion of sodium ions as a result of the addition of an inorganic salt at between 0.01 and 0.5 wt%, which falls within the claimed range, as taught in paragraph 0043. Even further, the references to Broz and Ekanayake clearly teach that salts (and ions) act as buffers for controlling taste of beverage. Yamamoto (JP08-000173) has been relied on as further evidence that the concept of employing ions such as potassium ions can stabilize the quality of tea leaves and moderate the bitterness. This is even further recognized by Inaoka et al. (WO0239822 A1) on page 17, where the salts, such as sodium salts incorporated into the beverage adjust the taste of the beverage. And in any case, Kuznicki et al. has been relied on to teach that it was still conventional to employ both sodium and potassium ions within applicants’ claimed range into beverages that comprised catechins.

Applicants urging of the long-term drinkability and storage stability as a result of the potassium ion concentration and sodium ion concentration based on examples 1-6 and comparative examples 1-6 from applicants' specification has been considered but is not deemed persuasive. For instance example 1 and comparative example 1, differ in the particular acids incorporated therein and thus differ in the particular pH of the beverage. Therefore, although the sodium ion content is much higher in comparative example 1, the difference in pH based on the different acids incorporated into both examples makes this showing unclear as to the definite effects of the sodium and potassium ion concentration on the indicated properties of the beverage. Similar inconsistencies are evidence between example 2 and comparative example 2 that make applicants' urging unconvincing. In this case, the amount of catechins present differ as do the ratios of quinic and oxalic acid, respectively, to non-polymer catechins. As another example, the data from Table 1 of applicants' specification is further not clear as to how 47 mg/100 ml of sodium and 44 mg/100 ml of potassium resulted in favorable results in example 1, however the same amounts in comparative example 5 resulted in unfavorable results. The difference between the two examples appears to only be the particular sweetener employed.

9. The declaration filed under 37 C.F.R. 1.132 by Masaki Inasaki, on December 16, 2008 has been considered but is not deemed persuasive. The data appear to indicate that the amount of non-polymer catechins decreases after storage but decreases more in examples 3 and 4, where the beverage employed other sweeteners such as a fruit

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extract and glucose. It is noted however, that the tables appear to indicate that regardless of the amount of non-polymer catechins present after storage, that each of examples 3 and 4 were of equal long-term drinkability, stability of bitterness and astringency, feeling as the beverage passed down the throat and color tone stability. Therefore this data, shown a decrease in non-polymer catechins is not convincing.

10. Regarding the rejections under 35 U.S.C. 112, second paragraph, it is noted that although the specification has provided examples of language which appears to indicate that the weight percent of the components are based on the packaged beverage, the language in claim 1 is still deemed indefinite since the claim recites language that is still not clear as to whether the green tea extract comprises components A to E or the packaged beverage. For instance, language such as "A packaged beverage, comprising a green tea extract, the packaged beverage comprising the following ingredients (A) to (E)" would clarify this issue. It is noted that this is not a suggestion to amend the claim language to the above example but rather is only an example of language that would make the limitations more clear.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIREN THAKUR whose telephone number is (571)272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571)-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steve Weinstein/  
Primary Examiner, Art Unit 1794

/V. T./  
Examiner, Art Unit 1794